



DRAGON SERIES ELECTRIC PUMPS

FOR OIL OR GREASE NLGI000

INSTRUCTION AND PRODUCT DATA SHEET

3901000
3902000
3903000

ENGLISH

1. DESCRIPTION:

These pumps are particularly suitable for lubrication systems and are available in three basic different types:

Motorised gear pumps for lubrication system equipped with meter units or control units and for recirculating lubrication systems - max. operating pressure 290 psi (20 bar) - Lubrication system 01.

Motorised gear pumps with built-in relief valve for lubrication systems equipped with positive metering valves- Lubrication systems 03 - 04 and 06.

Motorised gear pumps for progressive lubrication systems and for recirculating lubrication systems controlled by progressive valves - Lubrication system 26.



2. SPECIFICATION:

2.1. Gear pump:

Delivery - 350 or 500 cm³/min. at 1500 r.p.m.

Max. operating pressures - 70 bar (1015psi.) with Three-phase motor, 40 bar (580psi.) with Single phase motor. (intermittent service). 30 bar (435psi.) (continuous service).

Pumpable lubricant - Oil with viscosity from 15 to 1000 cSt or Grease grade NLGI000 at the operating temperature. Operating temperature - from -20°C to +100°C

2.2. Electric motor :

Standard motor: three phase at 4 poles multivoltage or single phase as specified.

Special three phase motor with the following voltages: 220/380V - 240/415V - 255/440V - 50/60 Hz 90 Watts.

Single phase motor 220V - 50 Hz 90 Watts.

Frame size 56 - Protection degree IP 55.

Insulation class F - Continuous operation S1.

12V and 24V dc motors available on request.

2.3. Reservoir:

Capacity:

3 - 5 litres (.79 - 1.32 US gallons) in Polythene semi-transparent.

3 litres (.79 US gallons) in Aluminium with level sight glass.

6 litres (1.59 US gallons) in Steel with level sight glass.

2.4. Suction filter:

Filtering grade 260 micron.

2.5. Low level indicator, magnetic type:

Reversible float with contact normally closed on the minimum level.

Max. commutable power 50W - 50VA

Max. voltage 220 ac - 150V dc - max. current: 3A

Reserve and min. lubricant level indicator is available on demand;

Equipped with floats and two switches: the upper one is used for minimum level signal (reserve) the lower one for the absolute minimum level signal.

2.6. Minimum level with inductive sensor (for oil and light grease, for 3 litre reservoir only).

Min voltage 30V ac - max. voltage 250V ac

Min peak current 15 mA - max. 300 mA

2.7. Valve block:

Fitted inside the reservoir, consists of:

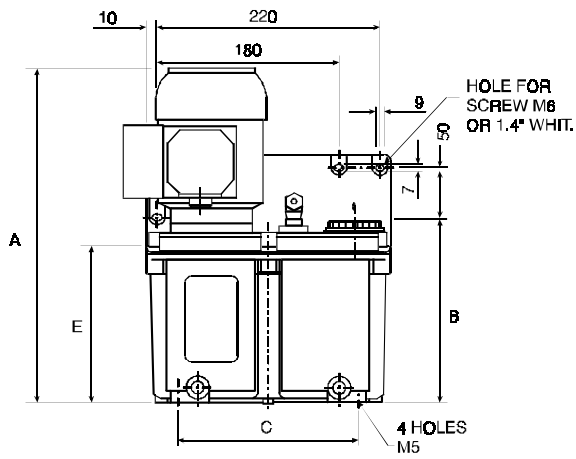
By pass valve, easily adjustable from the outside. Relief valve for systems equipped with positive metering valves.

3. INSTALLATION:

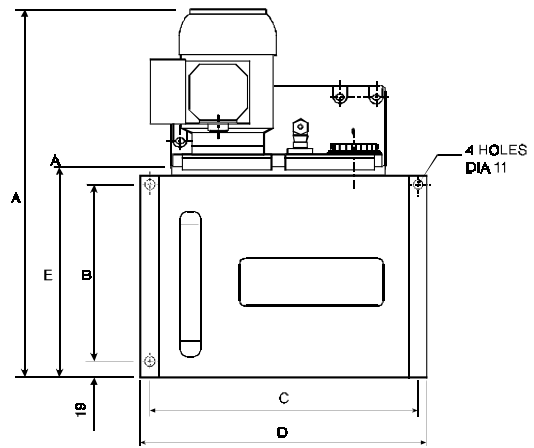
3.1. Dimensions:

Reservoir capacity 3 litre (.79 US gallons) Polythene		
	m.m.	inches
A	337,50	13.29
B	187,00	7.36
C	177,80	7.00
D	240,00	9.45
E	160,50	6.32

3 - 5 litre reservoir (Polythene)



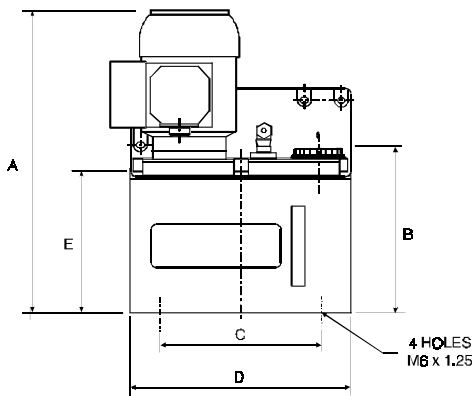
6 litre reservoir (Steel)



Reservoir capacity 5 litre (1.32 US gallons) Polythene		
	m.m.	inches
A	430,50	16.95
B	280,00	11.02
C	177,80	7.00
D	240,00	9.45
E	253,50	9.98

Reservoir capacity 6 litre (1.59 US gallons) Steel		
	m.m.	inches
A	421,00	16.57
B	205,00	8.07
C	305,00	12.00
D	327,00	12.87
E	243,50	9.59

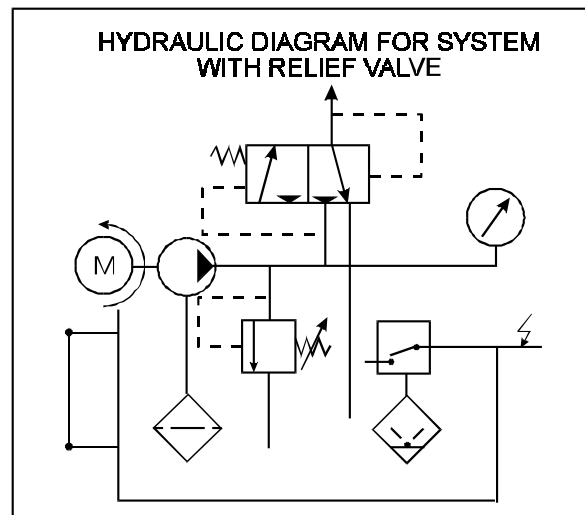
3 litre reservoir (Aluminium)



Reservoir capacity 3 litre (.79 US gallons) Aluminium		
	m.m.	inches
A	330,00	12.99
B	179,00	7.05
C	177,80	7.00
D	240,00	9.45
E	152,50	6.00

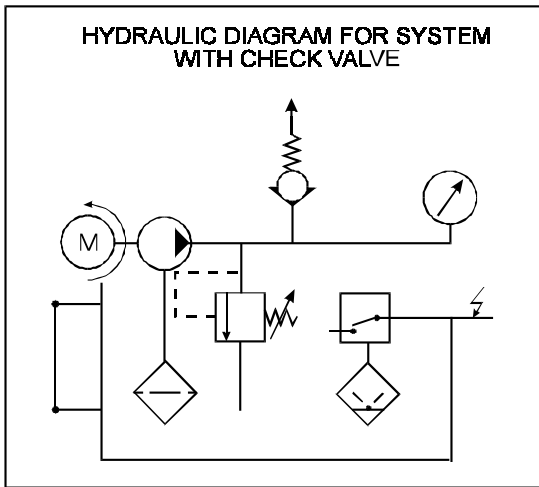
3.2. Adjustable pressure range and hydraulics diagram:

Hydraulic diagram Lubrication systems 04 - 06



Pumps with relief valve (intermittent operation only)
 Pressure min. 25 bar (363 psi.)
 max. 70 bar (1015 psi.)
 Standard setting of by-pass valve:
 50 bar (725 psi.)

Hydraulic diagram Lubrication system 26
Pumps with check valve for progressive system.
Pressure min. 25 bar (363 psi.)
max. 70 bar (1015 psi.)
Standard setting of by-pass valve:
70 bar (1015 psi.)
Hydraulic diagram Lubrication system 01



Pumps with check valve for low pressure lubrication systems
Pressure min. 2 bar (29 psi.)
max. 20 bar (290 psi.)
Standard setting of by-pass valve:
5 bar (72 psi.)

3.3. Diagnostic table:

Refer to table on page 5.

4. TEST PROCEDURES:

Available on request.

5. PART NO'S./ORDERING INFORMATION:

Motor	Reservoir capacity	Delivery cc/min.	Part No.
Three phase Multi-tension/ multi-frequency	3ltr. nylon	500	3904010
	6ltr. nylon		3904011
	6ltr. steel		3904012
Single phase 110V - 50/60 Hz.	3ltr. nylon	500	3904020
	6ltr. nylon		3904021
	6ltr. steel		3904022
Single phase 230V - 50/60 Hz.	3ltr. nylon	500	3904030
	6ltr. nylon		3904031
	6ltr. steel		3904032

6. SPARES:

6.1. Alternative pressure switches available:

220V ac. 5A or 220V dc. 0.2A to be ordered separately.

Connector 3 pin:

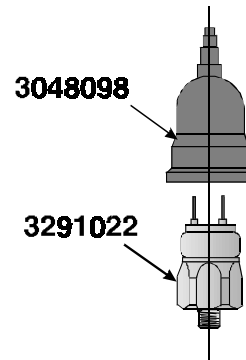
Part No.	Pressure range (bar)
329118	8 - 26
329119	15 - 60
329120	35 - 100

Cable Cm 150 cm. long:

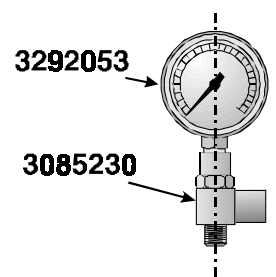
Part No.	Pressure range (bar)
329128	8 - 26
329129	15 - 60
329130	35 - 100

Optional Accessories:

PRESSURE SWITCH



PRESSURE GAUGE



Part No.	Description
3291022	Pressure switch, adjustable 20 - 50 bar (290 - 725 psi.)
3042098	Rubber cover for pressure switch
3232053	Pressure gauge, scale 0 - 60 bar (0 - 870 psi.)
3085230	Fitting.

7. SAFETY REQUIREMENTS:

DRAGON Series Electric Pumps must be installed and operated in accordance with the requirements of this Instruction Sheet. These pumps should not be used for any purpose other than as specified without the agreement of the supplier.

DIAGNOSTIC TABLE		
FAILURES	PROBABLE CAUSE	REMEDY
Pump discharge little or no lubricant.	Lubricant in the reservoir below the minimum level.	Re-fill the reservoir.
	Suction filter clogged.	Wash the filter with petroleum and dry with compressed air.
	Loose fittings inside the system.	Check fittings for leakages.
	Pump damaged.	Replace the pump.
Wrong operating pressure.	Pressure adjustment valve (bypass) completely loose. Lubricant returns to the reservoir and does not move to the outlet valve.	Regulate the adjusting screw until lubricant moves to the outlet.
	Wrong setting of pressure adjustment valve.	Connect a hose 30 cm. (12 inches long approx.) to the pump outlet and connect a pressure gauge to the hose; set the pressure valve at the desired pressure.
	Pressure adjustment valve dirty.	Remove the elastic safety ring which locks the pressure regulating valve and relief valve assembly (See position 'G' in the drawing) and disassemble the valves assembly. Wash the valves assembly using petroleum and dry with compressed air. When reassembling the valves assembly check the conditions of 'O' rings and if necessary replace them or replace the valve assembly.
No pressure relief in the line at the end of lubrication cycle.	Relief valve or check valve damaged.	Disassemble the pressure regulating valve assembly and replace the valve assembly.
	Irregular operation of relief valve.	Disassemble the pressure regulating valve and relief valve assembly; inspect and replace the valve assembly if necessary.

Disconnect from the power supply before making any adjustments to the system or changing pump settings.

Apart from the need for general safety precautions there are no specific hazards associated with the operation of these pumps.

U.K.
Dropsa (UK) Ltd.
Unit 8, Egham Business Village,
Egham,
Surrey, TW20 8RB
Tel: (+44) 01784 - 431177
Fax: (+44) 01784 - 438588
E-mail: salesuk@dropsa.com

U.S.A.
Dropsa Corporation
50879 Wing Drive
Utica,
Michigan 48315.
Tel: (+1) 810-568-1540
Fax: (+1) 810-568-1541
E-mail: salesusa@dropsa.com

AUSTRALIA
Dropsa Australia Pty.
No. 7 Wannigah Road
Dee Why
NSW 2099
Tel: (+61) 2 9905 0410
Fax: (+61) 2 88384142
E-mail: sales@dropsa.com

GERMANY
Dropsa GmbH.
Volmerswerther Strasse 80
40221 Düsseldorf 1,
Deutschland
Tel: (+49) 0211-394-011
Fax: (+49) 0211-394-013
E-mail: sales@dropsa.de

ITALY
Dropsa Spa
Via B. Croce, 1 - 20090
Vimodrone (MI)
Tel: (+39) 02 - 250.79.1
Fax: (+39) 02 - 250.79.787
E-mail: sales@dropsa.it (Export)
E-mail: vendite@dropsa.it (National)

8. OPERATING ENVIRONMENT:

DRAGON Series Electric Pumps must not be operated submersed in fluid or in excessively corrosive or aggressive environments. If in doubt please contact our technical office

© Copyright Dropsa - all rights reserved. Reproduction of any part of this document is strictly forbidden without prior consent from Dropsa. Dropsa reserve the right to withdraw or modify specifications without prior notice.